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4, 7TH MAIN MALLESWARAM, BANGALORE -3
Certificate No. TC- 9548

TEST REPORT ON COARSE AGGREGATES

Format No: CP/TF/01

Lab ID	:	**CP-2018-01-01-11**
Customer	:	Assistant Executive Engineer, Dasarahalli Sub Division, BBMP, Bangalore. **Date: 04-01-18**
Address	:	Dasarahalli Sub Division, BBMP, Bangalore.
Project Name	:	Improvements to roads and drains at Ganapathi Badavane 1st main roads & Other cross roads in ward No.14 Bagalagunte.
Agency	:	Technical Manager West, KRIDL, Project Implementation Unit, No.280, 59th Cross, 17th 'C' main road, 3rd 'Y' Block, Rajajinagar, Bangalore-560 010.
Customer's Reference	:	BBMP/EE/DD/WO/87/2017-18
Source of Sample	:	Sample supplied by Agency
Sample condition	:	Satisfactory
Date of Receipt	:	01-01-18
Sample ID No	:	2018-01-01-11 /02(a)
Sample Type	:	40mm down size coarse aggregate
Reference to BIS codes	:	IS: 383:2016 (Specification for Coarse and fine Aggregates) IS: 2386 :1963(Part - 1,3,4) RA2011 IS 2386 Part 1: Particle Size and Shape IS 2386 Part 3: Specific gravity, Density, Voids,Water Absorption IS 2386 Part 4: Mechanical Properties
Date of test	:	01-01-18

SIEVE ANALYSIS (PARTICLE SIZE DISTRIBUTION) OF 40MM DOWN COARSE AGGREGATE:

Total weight taken : 15000 grams

Sample No.	Sieve No.	Weight Retained in gms	Cumulative Weight Retained in gms	% Cumulative Weight Retained	% Passing	Required as per IS 383:2016
1	80 mm	0	0	0.0	100	100
2	40 mm	268	268	1.8	98.2	90-100
3	20 mm	5621	5889	39.3	60.7	30-70
4	10 mm	4356	10245	68.3	31.7	10-35
5	4.75 mm	4215	14460	96.4	3.6	0-5
6	Pan	540	15000	100.0	0	---

Sig.....
Date.....
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Certificate No.: TC- 5648

TEST REPORT ON COARSE AGGREGATES

Format No: CP/TF/01

Lab ID : **CP-2018-01-01-11**

Sample ID No : 2018-01-01-11 /02(a)

Date: 04-01-18

PHYSICAL PROPERTIES

Sl.no	Tests	Result	Requirements as per IS:383-2016
1	Flakiness Index(%)	11.4	Combined Flakiness & Elongation Index Shall not Exceed 40% for Uncrushed & Crushed Aggregate
2	Elongation Index(%)	10.8	
3	Specific Gravity	2.68	-
4	Bulk Density(Loose) (Kg/l)	1.45	-
5	Bulk Density(Compacted) (Kg/l)	1.49	-
6	Water Absorption(%)	0.24	-

Note:

The results pertain to the samples received and tested.
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CIVIL Pro Sig Date BANGALORE

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R KARTHIK RECHAN
Authorized Signatory
Quality Manager

****End of Report****

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Certificate No: TC-5049

TEST REPORT ON COARSE AGGREGATES

Format No: CP/TF/01

Lab ID	:	**CP-2018-01-01-11** **Date: 04-01-18**
Customer	:	Assistant Executive Engineer, Dasarahalli Sub Division, BBMP, Bangalore.
Address	:	Dasarahalli Sub Division, BBMP, Bangalore.
Project Name	:	Improvements to roads and drains at Ganapathi Badavane 1st main roads & Other cross roads in ward No.14 Bagalagunte.
Agency	:	Technical Manager West, KRIDL, Project Implementation Unit, No.280, 59th Cross, 17th 'C' main road, 3rd 'Y' Block, Rajajinagar, Bangalore-560 010.
Customer Reference	:	BBMP/EE/DD/WO/87/2017-18
Source of Sample	:	Sample supplied by Agency
Sample Condition	:	Satisfactory
Date of Receipt	:	01-01-18
Sample ID No	:	2018-01-01-11 /02(b)
Sample Type/ Size	:	20mm down size coarse aggregate
Reference to BIS codes	:	IS: 383:2016 (Specification for Coarse and fine Aggregates) IS: 2386 :1963(Part - 1,3,4) RA2011 IS 2386 Part 1: Particle Size and Shape IS 2386 Part 3: Specific gravity, Density, Voids,Water Absorption IS 2386 Part 4: Mechanical Properties
Date of test	:	01-01-18

SIEVE ANALYSIS (PARTICLE SIZE DISTRIBUTION) OF 20MM DOWN COARSE AGGREGATE:

Total weight taken : 5000 grams

Sample No.	Sieve No.	Weight Retained in gms	Cumulative Weight Retained in gms	% Cumulative Weight Retained	% Passing	Required as per IS 383:2016
1	40 mm	0	0	0	100	100
2	20 mm	245	245	4.9	95.1	90-100
3	10 mm	2356	2601	52.0	48.0	25-55
4	4.75 mm	1985	4586	91.7	8.3	0-10
5	Pan	414	5000	100	0	-

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Format No: CP/TF/01

TEST REPORT ON COARSE AGGREGATES

Lab ID : **CP-2018-01-01-11** **Date: 04-01-18**

Sample ID No : 2018-01-01-11 /02(b)

PHYSICAL PROPERTIES

Sl.no	Tests	Result	Requirements as per IS:383-2016
1	Flakiness Index(%)	11.5	Combined Flakiness & Elongation Index Shall not Exceed 40% for Uncrushed & Crushed Aggregate
2	Elongation Index(%)	11.9	
3	Specific Gravity	2.66	
4	Bulk Density(Loose) (Kg/l)	1.48	
5	Bulk Density(Compacted) (Kg/l)	1.53	
6	Water Absorption(%)	0.22	
7	Aggregate crushing Value(%)	23.8	Max 30% for Aggregates to be used in concrete for wearing Surface. In case Aggregate Crushing Value Exceeds 30% then the test for ten percent fines should be conducted for Aggregates to be used in concrete other than for wearing Surface
8	Aggregate Impact Value(%)	21.4	30% for Aggregates to be used in concrete for wearing Surface, 45% for Aggregates to be used in concrete other than for wearing Surface.

Note:

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R KARTHIK RECHAN
Authorized Signature
Quality Manager

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Certificate No. TC-9469

TEST REPORT OF FINE AGGREGATE

Format No: CPTF/01

Date: 04-01-18

Lab ID	:	CP-2018-01-01-11
Customer	:	Assistant Executive Engineer, Dasarahalli Sub Division, BBMP, Bangalore.
Address	:	Dasarahalli Sub Division, BBMP, Bangalore.
Project Name	:	Improvements to roads and drains at Ganapathi Badavane 1st main roads & Other cross roads in ward No.14 Bagalagunte.
Agency	:	Technical Manager West, KRIDL, Project Implementation Unit, No.280, 59th Cross, 17th 'C' main road, 3rd 'Y' Block, Rajajinagar, Bangalore-560 010.
Customer's Reference	:	BBMP/EE/DD/WO/87/2017-18
Source of Sample	:	Sample supplied by Agency
Sample Condition	:	Satisfactory
Date of Receipt	:	01-01-18
Sample ID No	:	2018-01-01-11 /03
Sample Type	:	Fine Aggregate
Reference to BIS codes	:	IS 383 : 2016 (Specification for Coarse and fine Aggregates) IS: 2386 :1963(Part - 1, 3) RA2012 IS 2386 Part 1: Particle Size and Shape IS 2386 Part 3: Specific gravity, Density, Voids,Water Absorption
Date of test	:	01-01-18
Total weight taken	:	1000 grams

Sl.no	Sieve Size	Weight Retained (gms)	Cumulative Weight Retained (gms)	% Cumulative Weight Retained	% Passing	Requirement as per IS 383:2016			
						Grading Zone I	Grading Zone II	Grading Zone III	Grading Zone IV
1	10 mm	0	0	0.0	100.0	100	100	100	100
2	4.75 mm	86	86	8.6	91.4	90-100	90-100	90-100	95-100
3	2.36 mm	146	232	23.2	76.8	60-95	75-100	85-100	95-100
4	1.18 mm	153	385	38.5	61.5	30-70	55-90	75-100	90-100
5	600 micron	169	554	55.4	44.6	15-34	35-59	60-79	80-100
6	300 micron	188	742	74.2	25.8	5-20	8-30	12-40	15-50
7	150 micron	175	917	91.7	8.3	0-10	0-10	0-10	0-15
8	Pan	83	1000	100.0	0.0	---	---	---	---

Result :The tested Sample Conforms to Grading Zone II

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Certificate No : TC- 9568

TEST REPORT OF FINE AGGREGATE

Lab ID : CP-2018-01-01-11

Sample ID No : 2018-01-01-11 /03

Date: 04-01-18

PHYSICAL PROPERTIES

Sl.no	Tests	Result	Requirements as per IS 383:2016
1	Water Absorption(%)	2.2	-
2	Specific Gravity	2.59	-
3	Material finer than 75 micron(%)	7.3	Uncrushed fine Aggregate Max 3%, Crushed Fine aggregate Max 15%, Mixed Fine aggregate Max 12%, Manufactured Fine aggregate Max 10%

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